

SEQUENCE LISTING

<110> Aslamkhan, Abu
Guo, Lining
Rice, John

<120> METHODS FOR IDENTIFYING INHIBITORS OF STEROL 14-alpha-DEMETHYLASE

<130> 2187US

<160> 15

<170> PatentIn version 3.2

<210> 1
<211> 488
<212> PRT
<213> Arabidopsis thaliana

<400> 1

Met Glu Leu Asp Ser Glu Asn Lys Leu Leu Lys Thr Gly Leu Val Ile
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Val Ala Thr Leu Val Ile Ala Lys Leu Ile Phe Ser Phe Phe Thr Ser
20 25 30

Asp Ser Lys Lys Lys Arg Leu Pro Pro Thr Leu Lys Ala Trp Pro Pro
35 40 45

Leu Val Gly Ser Leu Ile Lys Phe Leu Lys Gly Pro Ile Ile Met Leu
50 55 60

Arg Glu Glu Tyr Pro Lys Leu Gly Ser Val Phe Thr Val Asn Leu Val
65 70 75 80

His Lys Lys Ile Thr Phe Leu Ile Gly Pro Glu Val Ser Ala His Phe
85 90 95

Phe Lys Ala Ser Glu Ser Asp Leu Ser Gln Gln Glu Val Tyr Gln Phe
100 105 110

Asn Val Pro Thr Phe Gly Pro Gly Val Val Phe Asp Val Asp Tyr Ser
115 120 125

Val Arg Gln Glu Gln Phe Arg Phe Phe Thr Glu Ala Leu Arg Val Asn
130 135 140

Lys Leu Lys Gly Tyr Val Asp Met Met Val Thr Glu Ala Glu Asp Tyr
145 150 155 160

Phe Ser Lys Trp Gly Glu Ser Gly Glu Val Asp Ile Lys Val Glu Leu
165 170 175

Glu Arg Leu Ile Ile Leu Thr Ala Ser Arg Cys Leu Leu Gly Arg Glu
180 185 190

Val Arg Asp Gln Leu Phe Asp Asp Val Ser Ala Leu Phe His Asp Leu
195 200 205

Asp Asn Gly Met Leu Pro Ile Ser Val Leu Phe Pro Tyr Leu Pro Ile
210 215 220

Pro Ala His Arg Arg Asp Arg Ala Arg Glu Lys Leu Ser Glu Ile
225 230 235 240

Phe Ala Lys Ile Ile Gly Ser Arg Lys Arg Ser Gly Lys Thr Glu Asn
245 250 255

Asp Met Leu Gln Cys Phe Ile Glu Ser Lys Tyr Lys Asp Gly Arg Gln
260 265 270

Thr Thr Glu Ser Glu Val Thr Gly Leu Leu Ile Ala Ala Leu Phe Ala
275 280 285

Gly Gln His Thr Ser Ser Ile Thr Ser Thr Trp Thr Gly Ala Tyr Leu
290 295 300

Met Arg Tyr Lys Glu Tyr Phe Ser Ala Ala Leu Asp Glu Gln Lys Asn
305 310 315 320

Leu Ile Ala Lys His Gly Asp Lys Ile Asp His Asp Ile Leu Ser Glu
325 330 335

Met Asp Val Leu Tyr Arg Cys Ile Lys Glu Ala Leu Arg Leu His Pro
340 345 350

Pro Leu Ile Met Leu Met Arg Ala Ser His Ser Asp Phe Ser Val Thr
355 360 365

Ala Arg Asp Gly Lys Thr Tyr Asp Ile Pro Lys Gly His Ile Val Ala

370

375

380

Thr Ser Pro Ala Phe Ala Asn Arg Leu Pro His Ile Phe Lys Asp Pro
385 390 395 400

Asp Thr Tyr Asp Pro Glu Arg Phe Ser Pro Gly Arg Glu Glu Asp Lys
405 410 415

Ala Ala Gly Ala Phe Ser Tyr Ile Ala Phe Gly Gly Arg His Gly
420 425 430

Cys Leu Gly Glu Pro Phe Ala Tyr Leu Gln Ile Lys Ala Ile Trp Ser
435 440 445

His Leu Leu Arg Asn Phe Glu Leu Glu Leu Val Ser Pro Phe Pro Glu
450 455 460

Ile Asp Trp Asn Ala Met Val Val Gly Val Lys Gly Asn Val Met Val
465 470 475 480

Arg Tyr Lys Arg Arg Gln Leu Ser
485

<210> 2

<211> 507

<212> PRT

<213> Oryza sativa

<400> 2

Met Asp His Val Thr Ser Ser Thr Ile Ala Arg Gly Ala Met Ser Trp
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Val Ala Ala Thr Val Ala Leu Leu Leu Thr Thr Ala Val Ile Leu Thr
20 25 30

Ala Leu Gln Lys Arg Lys Ile Ser Ser Pro Ala Ala Ala Pro Pro
35 40 45

Val Val Arg Gly Ala Gly Leu Val Arg Phe Ala Arg Ala Met Ala Arg
50 55 60

Asp Gly Pro Leu Glu Ala Ile Arg Glu Gln Gln Ala Lys Leu Gly Ser
65 70 75 80

Val Phe Thr Ala Ile Ala Pro Phe Gly Leu Phe Lys Val Thr Phe Leu
85 90 95

Ile Gly Pro Glu Val Ser Ser His Phe Tyr Leu Ala Pro Glu Ser Glu
100 105 110

Met Gly Gln Gly Ser Ile Tyr Arg Phe Thr Val Pro Leu Phe Gly Pro
115 120 125

Glu Val Gly Tyr Ala Val Asp Pro Asp Thr Arg Ala Glu Gln Met Arg
130 135 140

Leu Phe Trp Asp Val Leu Lys Pro Arg Ser Ile Glu Ala Arg Val Gly
145 150 155 160

Ala Met Ala Glu Glu Val Gln Asn Tyr Phe Ser Arg Trp Gly Glu Gln
165 170 175

Gly Thr Val Asp Leu Lys Glu Leu Glu Gln Val Leu Met Leu Ile
180 185 190

Ala Ser Arg Cys Leu Leu Gly Arg Glu Val Arg Glu Ser Met Val Asp
195 200 205

Glu Val Tyr Glu Leu Phe Arg Asp Leu Asp Asn Gly Leu His Leu Ile
210 215 220

Ser Thr Met Leu Pro Tyr Leu Pro Thr Pro Ala His Arg Arg Arg Asp
225 230 235 240

Arg Ala Arg Gln Arg Leu Gly Glu Ile Phe Thr Glu Val Ile Arg Ser
245 250 255

Arg Arg Asn Ser Gly Thr Ala Asp Asn Gly Asp Asp Val Leu Gln Arg
260 265 270

Leu Ile Asp Gly Arg Tyr Lys Asp Glu Arg Asp Leu Thr Asp Val Glu
275 280 285

Val Val Gly Leu Leu Val Ala Leu Val Phe Ala Gly Lys His Ser Ser
290 295 300

Ser Ser Val Ser Thr Trp Thr Gly Ile Asn Leu Leu Ser His Pro Asn
305 310 315 320

His Leu Val Ala Val Ile Ala Glu Gln Asp Arg Leu Met Ala Ser Arg
325 330 335

Ala Arg Thr Asp Asp Asp His Asp Arg Val Asn Tyr Asp Thr Val Gln
340 345 350

Glu Met Thr Thr Leu His Arg Cys Ile Lys Glu Ala Leu Arg Leu His
355 360 365

Pro Pro Ala Val Ala Met Phe Arg Gln Ala Arg Lys His Phe Thr Val
370 375 380

Gln Thr Lys Glu Gly Lys Glu Tyr Thr Ile Pro Gly Gly His Thr Val
385 390 395 400

Met Ser Thr Ile Leu Val Asn His His Met Pro Asn Val Tyr Lys Asp
405 410 415

Pro His Val Phe Asp Pro Ser Arg Phe Ala Arg Gly Arg Gly Glu Asp
420 425 430

Lys Ala Ala Gly Pro Phe Ser Phe Leu Ala Phe Gly Ala Gly Arg His
435 440 445

Ser Cys Ala Gly Glu Ser Phe Ala Tyr Thr Gln Ile Lys Val Ile Trp
450 455 460

Ser His Leu Leu Arg Asn Phe Glu Leu Lys Met Val Ser Pro Phe Pro
465 470 475 480

Glu Thr Ser Trp Arg Met Val Thr Pro Glu Pro Lys Gly Thr Val Met
485 490 495

Ile Ser Tyr Arg Arg Arg Asn Leu Thr Cys Lys
500 505

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<211> 487
<212> PRT
<213> Nicotiana tabacum

<400> 3

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Val Thr Leu Val Val Ala Lys Leu Ile Ser Ala Leu Ile Met Pro Arg
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Ser Lys Lys Arg Leu Pro Pro Val Ile Lys Ser Trp Pro Ile Leu Gly
35 40 45

Gly Leu Leu Arg Phe Leu Lys Gly Pro Val Val Met Leu Arg Glu Glu
50 55 60

Tyr Pro Lys Leu Gly Ser Val Phe Thr Leu Asn Leu Leu Asn Lys Asn
65 70 75 80

Ile Thr Phe Phe Ile Gly Pro Glu Val Ser Ala His Phe Phe Lys Ala
85 90 95

Pro Glu Thr Asp Leu Ser Gln Gln Glu Val Tyr Gln Phe Asn Val Pro
100 105 110

Thr Phe Gly Pro Gly Val Val Phe Asp Val Asp Tyr Thr Ile Arg Gln
115 120 125

Glu Gln Phe Arg Phe Phe Thr Glu Ala Leu Arg Val Asn Lys Leu Lys
130 135 140

Gly Tyr Val Asp His Met Val Met Glu Ala Glu Glu Tyr Phe Ser Lys
145 150 155 160

Trp Gly Asp Ser Gly Glu Met Asp Leu Lys Tyr Glu Leu Glu His Leu
165 170 175

Ile Ile Leu Thr Ala Ser Arg Cys Leu Leu Gly Glu Glu Val Arg Asn
180 185 190

Lys Leu Phe Glu Asp Val Ser Ala Leu Phe His Asp Leu Asp Asn Gly
195 200 205

Met Leu Pro Ile Ser Val Ile Phe Pro Tyr Leu Pro Ile Pro Ala His
210 215 220

Arg Arg Arg Asp Asn Ala Arg Lys Lys Leu Ala Glu Ile Phe Ala Asn
225 230 235 240

Ile Ile Asp Ser Arg Lys Arg Thr Gly Lys Ala Glu Ser Asp Met Leu
245 250 255

Gln Cys Phe Ile Asp Ser Lys Tyr Lys Asp Gly Arg Ala Thr Thr Asp
260 265 270

Ser Glu Ile Thr Gly Leu Leu Ile Ala Ala Leu Phe Ala Gly Gln His
275 280 285

Thr Ser Ser Ile Thr Ser Thr Trp Thr Gly Ala Tyr Leu Leu Cys Asn
290 295 300

Asn Lys Tyr Met Ser Ala Val Val Asp Glu Gln Lys Asn Leu Met Lys
305 310 315 320

Lys His Gly Asn Lys Val Asp His Asp Ile Leu Ser Glu Met Glu Val
325 330 335

Leu Tyr Arg Cys Ile Lys Glu Val Leu Arg Leu His Pro Pro Leu Ile
340 345 350

Met Leu Leu Arg Ser Ser His Ser Asp Phe Thr Val Lys Thr Arg Glu
355 360 365

Gly Lys Glu Tyr Asp Ile Pro Lys Gly His Ile Val Ala Thr Ser Pro
370 375 380

Ala Phe Ala Asn Arg Leu Pro His Val Tyr Lys Asn Pro Asp Thr Tyr
385 390 395 400

Asp Pro Asp Arg Phe Thr Pro Gly Arg Asp Glu Asp Lys Val Ala Gly
405 410 415

Ala Phe Ser Tyr Ile Ser Phe Gly Gly Arg His Gly Cys Leu Gly
420 425 430

Glu Pro Phe Ala Tyr Leu Gln Ile Lys Ala Ile Trp Ser His Leu Leu
435 440 445

Arg Asn Phe Glu Phe Glu Leu Ile Ser Pro Phe Pro Glu Ile Asp Trp
450 455 460

Asn Ala Met Val Val Gly Val Lys Gly Lys Val Met Val Lys Tyr Lys
465 470 475 480

Arg Arg Lys Leu Ser Asn Glu
485

<210> 4
<211> 453
<212> PRT
<213> Triticum aestivum

<400> 4

Arg Pro Pro Pro Thr Ile Pro Gly Ala Pro Val Val Gly Gly Leu Leu
1 5 10 15

Arg Phe Leu Arg Gly Pro Ile Pro Leu Ile Arg Ala Glu Tyr Ala Arg
20 25 30

Leu Gly Pro Val Phe Thr Val Pro Ile Leu Thr Arg Arg Ile Thr Phe
35 40 45

Leu Ile Gly Pro Asp Val Ser Ala His Phe Phe Lys Ser Asn Glu Ser
50 55 60

Asp Met Ser Gln Gln Glu Val Tyr Arg Phe Asn Val Pro Thr Phe Gly
65 70 75 80

Pro Gly Val Val Phe Asp Val Asp Tyr Gln Val Arg Gln Glu Gln Phe
85 90 95

Arg Phe Phe Thr Glu Ala Leu Arg Ala Asn Lys Leu Arg Ser Tyr Val
100 105 110

Asp Gln Met Val Ala Glu Ala Glu Glu Tyr Phe Ser Lys Trp Gly Glu
115 120 125

Ser Gly Thr Val Asp Leu Lys Tyr Glu Leu Glu His Leu Ile Ile Leu
130 135 140

Thr Ala Ser Arg Cys Leu Leu Gly Arg Glu Val Arg Glu Lys Leu Phe
145 150 155 160

Asp Asp Val Ser Ala Leu Phe His Asp Leu Asp Asn Gly Met Leu Pro
165 170 175

Ile Ser Val Ile Phe Pro Tyr Leu Pro Ile Pro Ala His Arg Arg Arg
180 185 190

Asp Gln Ala Arg Thr Arg Leu Ala Glu Ile Phe Ala Thr Ile Ile Lys
195 200 205

Ser Arg Lys Ala Ser Gly Gln Ser Glu Glu Asp Met Leu Gln Cys Phe
210 215 220

Ile Asp Ser Lys Tyr Lys Asn Gly Arg Gln Thr Thr Glu Ser Glu Val
225 230 235 240

Thr Gly Leu Leu Ile Ala Ala Leu Phe Ala Gly Gln His Thr Ser Ser
245 250 255

Ile Thr Ser Thr Trp Thr Gly Ala Tyr Leu Leu Lys Phe Gln Gln Tyr
260 265 270

Phe Ala Glu Ala Val Glu Glu Gln Lys Glu Val Met Lys Arg His Gly
275 280 285

Asp Lys Ile Asp His Asp Ile Leu Ala Glu Met Asp Val Leu Tyr Arg
290 295 300

Cys Ile Lys Glu Ala Leu Arg Leu His Pro Pro Leu Ile Met Leu Leu
305 310 315 320

Arg Gln Ser His Ser Asp Phe Ser Val Thr Thr Arg Glu Gly Lys Glu
325 330 335

Phe Asp Ile Pro Lys Gly His Ile Val Ala Thr Ser Pro Ala Phe Ala
340 345 350

Asn Arg Leu Pro His Ile Phe Lys Asn Pro Asp Ser Tyr Asp Pro Asp
355 360 365

Arg Phe Ala Ala Gly Arg Glu Glu Asp Lys Val Ala Gly Ala Phe Ser
370 375 380

Tyr Ile Ser Phe Gly Gly Arg His Gly Cys Leu Gly Glu Pro Phe
385 390 395 400

Ala Tyr Leu Gln Ile Lys Ala Ile Trp Thr His Leu Leu Arg Asn Phe
405 410 415

Glu Phe Glu Leu Val Ser Pro Phe Pro Glu Asn Asp Trp Asn Ala Met
420 425 430

Val Val Gly Ile Lys Gly Glu Val Met Val Asn Tyr Lys Arg Arg Lys
435 440 445

Leu Ile Val Asp Asn
450

<210> 5
<211> 492
<212> PRT
<213> Sorghum bicolor

<400> 5
Met Asp Leu Ala Asp Ile Pro Gln Gln Gln Arg Leu Met Ala Gly Leu
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Ala Leu Val Val Ala Thr Val Ile Phe Leu Lys Leu Leu Leu Ser Phe
20 25 30

Arg Ser Gly Gly Lys Lys Arg Leu Pro Pro Thr Ile Pro Gly Ala
35 40 45

Pro Val Val Gly Gly Leu Val Lys Phe Met Arg Gly Pro Ile Pro Met
50 55 60

Ile Arg Glu Gln Tyr Ala Ala Leu Gly Ser Val Phe Thr Val Pro Ile
65 70 75 80

Ile Thr Arg Arg Ile Thr Phe Leu Ile Gly Pro Glu Val Ser Ala His
85 90 95

Phe Phe Lys Gly Asn Glu Ala Glu Met Ser Gln Gln Glu Val Tyr Arg
100 105 110

Phe Asn Val Pro Thr Phe Gly Pro Gly Val Val Phe Asp Val Asp Tyr

115 120 125

Ser Val Arg Gln Gln Glu Phe Arg Phe Phe Thr Glu Ala Leu Arg Ala
130 135 140

Asn Lys Leu Arg Ser Tyr Val Asp Gln Met Val Ala Glu Ala Glu Glu
145 150 155 160

Tyr Phe Ser Lys Trp Gly Glu Ser Gly Thr Val Asp Leu Lys Tyr Glu
165 170 175

Leu Glu His Leu Ile Ile Leu Thr Ala Ser Arg Cys Leu Gly Arg
180 185 190

Glu Val Arg Glu Lys Leu Phe Asp Asp Val Ser Ala Leu Phe His Asp
195 200 205

Leu Asp Asn Gly Ile Gln Pro Ile Ser Val Leu Phe Pro Tyr Leu Pro
210 215 220

Ile Pro Ala His Lys Arg Arg Asp Lys Ala Arg Ala Arg Leu Ala Glu
225 230 235 240

Ile Phe Ala Thr Ile Ile Lys Ser Arg Lys Ala Ser Gly Gln Ser Glu
245 250 255

Glu Asp Met Leu Gln Cys Phe Ile Asp Ser Lys Tyr Lys Asn Gly Arg
260 265 270

Pro Thr Thr Glu Gly Glu Val Thr Gly Leu Leu Ile Ala Ala Leu Phe
275 280 285

Ala Gly Gln His Thr Ser Ser Ile Thr Ser Thr Trp Thr Gly Ala Tyr
290 295 300

Met Leu Arg Phe Lys Gln Tyr Phe Ala Glu Ala Val Glu Glu Gln Lys
305 310 315 320

Asp Val Met Lys Arg His Gly Asp Lys Ile Asp His Asp Ile Leu Ala
325 330 335

Glu Met Asp Val Leu Tyr Arg Cys Ile Lys Glu Ala Leu Arg Leu His
340 345 350

Pro Pro Leu Ile Met Leu Leu Arg Gln Ser His Ser Asp Phe Thr Val
355 360 365

Thr Thr Lys Glu Gly Lys Glu Tyr Asp Ile Pro Lys Gly His Ile Val
370 375 380

Ala Thr Ser Pro Ser Phe Ala Asn Arg Leu Pro His Ile Tyr Lys Asn
385 390 395 400

Pro Asp Ser Tyr Asp Pro Asp Arg Phe Gly Pro Gly Arg Glu Glu Asp
405 410 415

Lys Ala Ala Gly Ala Phe Ser Tyr Ile Ser Phe Gly Gly Arg His
420 425 430

Gly Cys Leu Gly Glu Pro Phe Ala Tyr Leu Gln Ile Lys Ala Ile Trp
435 440 445

Thr His Leu Leu Arg Asn Phe Glu Phe Glu Leu Val Ser Pro Phe Pro
450 455 460

Glu Asn Asp Trp Asn Ala Met Val Val Gly Ile Lys Gly Glu Val Met
465 470 475 480

Val Asn Tyr Lys Arg Arg Lys Leu Val Val Asp Asn
485 490

<210> 6
<211> 530
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 6

Met Ser Ala Thr Lys Ser Ile Val Gly Glu Ala Leu Glu Tyr Val Asn
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Ile Gly Leu Ser His Phe Leu Ala Leu Pro Leu Ala Gln Arg Ile Ser
20 25 30

Leu Ile Ile Ile Ile Pro Phe Ile Tyr Asn Ile Val Trp Gln Leu Leu
35 40 45

Tyr Ser Leu Arg Lys Asp Arg Pro Pro Leu Val Phe Tyr Trp Ile Pro
 50 55 60

Trp Val Gly Ser Ala Val Val Tyr Gly Met Lys Pro Tyr Glu Phe Phe
 65 70 75 80

Glu Glu Cys Gln Lys Lys Tyr Gly Asp Ile Phe Ser Phe Val Leu Leu
 85 90 95

Gly Arg Val Met Thr Val Tyr Leu Gly Pro Lys Gly His Glu Phe Val
 100 105 110

Phe Asn Ala Lys Leu Ala Asp Val Ser Ala Glu Ala Ala Tyr Ala His
 115 120 125

Leu Thr Thr Pro Val Phe Gly Lys Gly Val Ile Tyr Asp Cys Pro Asn
 130 135 140

Ser Arg Leu Met Glu Gln Lys Lys Phe Val Lys Gly Ala Leu Thr Lys
 145 150 155 160

Glu Ala Phe Lys Ser Tyr Val Pro Leu Ile Ala Glu Glu Val Tyr Lys
 165 170 175

Tyr Phe Arg Asp Ser Lys Asn Phe Arg Leu Asn Glu Arg Thr Thr Gly
 180 185 190

Thr Ile Asp Val Met Val Thr Gln Pro Glu Met Thr Ile Phe Thr Ala
 195 200 205

Ser Arg Ser Leu Leu Gly Lys Glu Met Arg Ala Lys Leu Asp Thr Asp
 210 215 220

Phe Ala Tyr Leu Tyr Ser Asp Leu Asp Lys Gly Phe Thr Pro Ile Asn
 225 230 235 240

Phe Val Phe Pro Asn Leu Pro Leu Glu His Tyr Arg Lys Arg Asp His
 245 250 255

Ala Gln Lys Ala Ile Ser Gly Thr Tyr Met Ser Leu Ile Lys Glu Arg
 260 265 270

Arg Lys Asn Asn Asp Ile Gln Asp Arg Asp Leu Ile Asp Ser Leu Met

275

280

285

Lys Asn Ser Thr Tyr Lys Asp Gly Val Lys Met Thr Asp Gln Glu Ile
290 295 300

Ala Asn Leu Leu Ile Gly Val Leu Met Gly Gly Gln His Thr Ser Ala
305 310 315 320

Ala Thr Ser Ala Trp Ile Leu Leu His Leu Ala Glu Arg Pro Asp Val
325 330 335

Gln Gln Glu Leu Tyr Glu Glu Gln Met Arg Val Leu Asp Gly Gly Lys
340 345 350

Lys Glu Leu Thr Tyr Asp Leu Leu Gln Glu Met Pro Leu Leu Asn Gln
355 360 365

Thr Ile Lys Glu Thr Leu Arg Met His His Pro Leu His Ser Leu Phe
370 375 380

Arg Lys Val Met Lys Asp Met His Val Pro Asn Thr Ser Tyr Val Ile
385 390 395 400

Pro Ala Gly Tyr His Val Leu Val Ser Pro Gly Tyr Thr His Leu Arg
405 410 415

Asp Glu Tyr Phe Pro Asn Ala His Gln Phe Asn Ile His Arg Trp Asn
420 425 430

Lys Asp Ser Ala Ser Ser Tyr Ser Val Gly Glu Glu Val Asp Tyr Gly
435 440 445

Phe Gly Ala Ile Ser Lys Gly Val Ser Ser Pro Tyr Leu Pro Phe Gly
450 455 460

Gly Gly Arg His Arg Cys Ile Gly Glu His Phe Ala Tyr Cys Gln Leu
465 470 475 480

Gly Val Leu Met Ser Ile Phe Ile Arg Thr Leu Lys Trp His Tyr Pro
485 490 495

Glu Gly Lys Thr Val Pro Pro Asp Phe Thr Ser Met Val Thr Leu
500 505 510

Pro Thr Gly Pro Ala Lys Ile Ile Trp Glu Lys Arg Asn Pro Glu Gln
515 520 525

Lys Ile
530

<210> 7
<211> 533
<212> PRT
<213> Candida glabrata

<400> 7

Met Ser Thr Glu Asn Thr Ser Leu Val Val Glu Leu Leu Glu Tyr Val
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Lys Leu Gly Leu Ser Tyr Phe Gln Ala Leu Pro Leu Ala Gln Arg Val
20 25 30

Ser Ile Met Val Ala Leu Pro Phe Val Tyr Thr Ile Thr Trp Gln Leu
35 40 45

Leu Tyr Ser Leu Arg Lys Asp Arg Pro Pro Leu Val Phe Tyr Trp Ile
50 55 60

Pro Trp Val Gly Ser Ala Ile Pro Tyr Gly Thr Lys Pro Tyr Glu Phe
65 70 75 80

Phe Glu Asp Cys Gln Lys Lys Tyr Gly Asp Ile Phe Ser Phe Met Leu
85 90 95

Leu Gly Arg Ile Met Thr Val Tyr Leu Gly Pro Lys Gly His Glu Phe
100 105 110

Ile Phe Asn Ala Lys Leu Ala Asp Val Ser Ala Glu Ala Ala Tyr Ser
115 120 125

His Leu Thr Thr Pro Val Phe Gly Lys Gly Val Ile Tyr Asp Cys Pro
130 135 140

Asn His Arg Leu Met Glu Gln Lys Lys Phe Val Lys Gly Ala Leu Thr
145 150 155 160

Lys Glu Ala Phe Val Arg Tyr Val Pro Leu Ile Ala Glu Glu Ile Tyr
165 170 175

Lys Tyr Phe Arg Asn Ser Lys Asn Phe Lys Ile Asn Glu Asn Asn Ser
180 185 190

Gly Ile Val Asp Val Met Val Ser Gln Pro Glu Met Thr Ile Phe Thr
195 200 205

Ala Ser Arg Ser Leu Leu Gly Lys Glu Met Arg Asp Lys Leu Asp Thr
210 215 220

Asp Phe Ala Tyr Leu Tyr Ser Asp Leu Asp Lys Gly Phe Thr Pro Ile
225 230 235 240

Asn Phe Val Phe Pro Asn Leu Pro Leu Glu His Tyr Arg Lys Arg Asp
245 250 255

His Ala Gln Gln Ala Ile Ser Gly Thr Tyr Met Ser Leu Ile Lys Glu
260 265 270

Arg Arg Glu Lys Asn Asp Ile Gln Asn Arg Asp Leu Ile Asp Glu Leu
275 280 285

Met Lys Asn Ser Thr Tyr Lys Asp Gly Thr Lys Met Thr Asp Gln Glu
290 295 300

Ile Ala Asn Leu Leu Ile Gly Val Leu Met Gly Gly Gln His Thr Ser
305 310 315 320

Ala Ala Thr Ser Ala Trp Cys Leu Leu His Leu Ala Glu Arg Pro Asp
325 330 335

Val Gln Glu Glu Leu Tyr Gln Glu Gln Met Arg Val Leu Asn Asn Asp
340 345 350

Thr Lys Glu Leu Thr Tyr Asp Asp Leu Gln Asn Met Pro Leu Leu Asn
355 360 365

Gln Met Ile Lys Glu Thr Leu Arg Leu His His Pro Leu His Ser Leu
370 375 380

Phe Arg Lys Val Met Arg Asp Val Ala Ile Pro Asn Thr Ser Tyr Val

385	390	395	400
Val Pro Arg Asp Tyr His Val Leu Val Ser Pro Gly Tyr Thr His Leu			
405		410	415
Gln Glu Glu Phe Phe Pro Lys Pro Asn Glu Phe Asn Ile His Arg Trp			
420		425	430
Asp Gly Asp Ala Ala Ser Ser Ala Ala Gly Gly Asp Glu Val Asp			
435		440	445
Tyr Gly Phe Gly Ala Ile Ser Lys Gly Val Ser Ser Pro Tyr Leu Pro			
450		455	460
Phe Gly Gly Gly Arg His Arg Cys Ile Gly Glu Leu Phe Ala Tyr Cys			
465		470	475
Gln Leu Gly Val Leu Met Ser Ile Phe Ile Arg Thr Met Lys Trp Arg			
485		490	495
Tyr Pro Thr Glu Gly Glu Thr Val Pro Pro Ser Asp Phe Thr Ser Met			
500		505	510
Val Thr Leu Pro Thr Ala Pro Ala Lys Ile Tyr Trp Glu Lys Arg His			
515		520	525
Pro Glu Gln Lys Tyr			
530			
<210> 8			
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<212> PRT			
<213> Uncinula necator			
<400> 8			
Met Tyr Ile Ala Asp Ile Leu Ser Asp Leu Leu Thr Gln Gln Thr Thr			
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15			
Arg Tyr Gly Trp Ile Phe Met Val Thr Ser Ile Ala Phe Ser Ile Ile			
20		25	30
Leu Leu Ala Val Gly Leu Asn Val Leu Ser Gln Leu Leu Phe Arg Arg			
35		40	45

Pro Tyr Glu Pro Pro Val Val Phe His Trp Phe Pro Ile Ile Gly Ser
50 55 60

Thr Ile Ser Tyr Gly Ile Asp Pro Tyr Lys Phe Tyr Phe Asp Cys Arg
65 70 75 80

Ala Lys Tyr Gly Asp Ile Phe Thr Phe Ile Leu Leu Gly Lys Lys Val
85 90 95

Thr Val Tyr Leu Gly Leu Gln Gly Asn Asn Phe Ile Leu Asn Gly Lys
100 105 110

Leu Lys Asp Val Asn Ala Glu Glu Ile Tyr Thr Asn Leu Thr Thr Pro
115 120 125

Val Phe Gly Arg Asp Val Val Tyr Asp Cys Pro Asn Ser Lys Leu Met
130 135 140

Glu Gln Lys Lys Phe Met Lys Thr Ala Leu Thr Ile Glu Ala Phe His
145 150 155 160

Ser Tyr Val Thr Ile Ile Gln Asn Glu Val Glu Ala Tyr Ile Asn Asn
165 170 175

Cys Val Ser Phe Gln Gly Glu Ser Gly Thr Val Asn Ile Ser Lys Val
180 185 190

Met Ala Glu Ile Thr Ile Tyr Thr Ala Ser His Ala Leu Gln Gly Glu
195 200 205

Glu Val Arg Glu Asn Phe Asp Ser Ser Phe Ala Ala Leu Tyr His Asp
210 215 220

Leu Asp Met Gly Phe Thr Pro Ile Asn Phe Thr Phe Tyr Trp Ala Pro
225 230 235 240

Leu Pro Trp Asn Arg Ala Arg Asp His Ala Gln Arg Thr Val Ala Arg
245 250 255

Thr Tyr Met Asn Ile Ile Gln Ala Arg Arg Glu Glu Lys Arg Ser Gly
260 265 270

Glu Asn Lys His Asp Ile Met Trp Glu Leu Met Arg Ser Thr Tyr Lys
275 280 285

Asp Gly Thr Pro Val Pro Asp Arg Glu Ile Ala His Met Met Ile Ala
290 295 300

Leu Leu Met Ala Gly Gln His Ser Ser Ser Thr Ser Ser Trp Ile
305 310 315 320

Met Leu Trp Leu Ala Ala Arg Pro Asp Ile Met Glu Glu Leu Tyr Glu
325 330 335

Glu Gln Leu Arg Ile Phe Gly Ser Glu Lys Pro Phe Pro Pro Leu Gln
340 345 350

Tyr Glu Asp Leu Ser Lys Leu Gln Leu His Gln Asn Val Leu Lys Glu
355 360 365

Val Leu Arg Leu His Ala Pro Ile His Ser Ile Met Arg Lys Val Lys
370 375 380

Asn Pro Met Ile Val Pro Gly Thr Lys Tyr Val Ile Pro Thr Ser His
385 390 395 400

Val Leu Ile Ser Ser Pro Gly Cys Thr Ser Gln Asp Ala Thr Phe Phe
405 410 415

Pro Asp Pro Leu Lys Trp Asp Pro His Arg Trp Asp Ile Gly Ser Gly
420 425 430

Lys Val Leu Gly Asn Asp Ala Val Asp Glu Lys Tyr Asp Tyr Gly Tyr
435 440 445

Gly Leu Thr Ser Thr Gly Ala Ser Ser Pro Tyr Leu Pro Phe Gly Ala
450 455 460

Gly Arg His Arg Cys Ile Gly Glu Gln Phe Ala Thr Leu Gln Leu Val
465 470 475 480

Thr Ile Met Ala Thr Met Val Arg Phe Phe Arg Phe Arg Asn Ile Asp
485 490 495

Gly Lys Gln Gly Val Val Lys Thr Asp Tyr Ser Ser Leu Phe Ser Met

500

505

510

Pro Leu Ala Pro Ala Leu Ile Gly Trp Glu Lys Arg
515 520

<210> 9
<211> 512
<212> PRT
<213> Cunninghamella elegans

<400> 9

Met Ala Ile Val Ser Gln Ile Ser Arg Phe Ile Thr Phe Thr Ile Ile
1 5 10 15

Ser Met Gly Tyr Ser Val Leu Ala Val Gly Val Ala Leu Thr Ile His
20 25 30

Ile Leu Ser Gln Leu Ile Val Pro Lys Asn Pro Asn Glu Pro Pro Asn
35 40 45

Val Phe Ser Leu Ile Pro Val Leu Gly Asn Ala Val Gln Phe Gly Met
50 55 60

Asn Pro Val Ala Phe Leu Gln Glu Cys Gln Lys Lys Tyr Gly Asp Val
65 70 75 80

Phe Thr Phe Thr Met Val Gly Lys Arg Val Thr Val Cys Leu Gly Ala
85 90 95

Asp Gly Asn Gln Phe Val Phe Asn Ser Lys Gln Asn Leu Ser Ser Ala
100 105 110

Ala Glu Ala Tyr Asn His Met Thr Lys Tyr Val Phe Gly Pro Asp Val
115 120 125

Val Tyr Asp Ala Pro His Ala Val Phe Met Glu Gln Lys Lys Phe Ile
130 135 140

Lys Ala Gly Leu Asn Ser Asp Cys Phe Arg Gln His Val Pro Met Ile
145 150 155 160

Val Gln Glu Thr Glu Glu Phe Phe Lys Lys Phe Asn Lys Pro Thr Gly
165 170 175

Phe Ile Glu Ala Tyr Glu Thr Phe Gly Ser Leu Ile Ile Tyr Thr Ala
180 185 190

Ser Arg Cys Leu Met Gly Lys Glu Ile Arg Ala Ser Leu Asp Gly Asn
195 200 205

Val Ala Lys Leu Tyr Tyr Asp Leu Asp Gln Gly Phe Lys Pro Ile Asn
210 215 220

Phe Ile Phe Pro Asn Leu Pro Leu Pro Ser Tyr Arg Arg Arg Asp Val
225 230 235 240

Ala Cys Lys Lys Met Ala Asp Leu Tyr Ser Ser Ile Ile Gln Arg Arg
245 250 255

Lys Asp Glu Lys Asp Asn Asn Asn Ala Asp Leu Leu Gln Ala Leu Met
260 265 270

Asp Ala Thr Tyr Lys Asp Gly Thr His Ile Pro Asp His His Ile Ala
275 280 285

Gly Met Met Ile Ala Val Leu Phe Gly Gly Gln His Thr Ser Ala Thr
290 295 300

Thr Ser Ala Trp Thr Ile Leu Glu Leu Ala Asn Arg Pro Asp Ile Ile
305 310 315 320

Lys Ala Leu Arg Glu Glu Gln Ile Glu Lys Leu Gly Ser Leu Lys Ala
325 330 335

Asp Leu Thr Phe Asp Asn Leu Lys Asp Leu Pro Leu Leu Glu Ala Ala
340 345 350

Ile Arg Glu Thr Leu Arg Leu His Pro Pro Ile Phe Gln Met Met Arg
355 360 365

Arg Val Val Ala Asp Lys Ile Val Tyr Glu Lys Asn Gly Met Glu Ile
370 375 380

Pro Lys Gly Asn Phe Ile Cys Ala Ala Pro Gly Val Thr Gln Val Asp
385 390 395 400

Pro Thr Tyr Phe Asn Glu Pro Thr Thr Tyr Asn Pro Tyr Arg Trp Ile
405 410 415

Glu Lys Thr Asp Pro Val His Gln Leu Glu Gln Gly Asp Asp Ala Asn
420 425 430

Ile Asp Tyr Gly Phe Gly Ala Val Gly Ile Ser Ser Lys Ser Pro Phe
435 440 445

Leu Pro Phe Gly Ala Gly Arg His Arg Cys Ile Gly Glu Gln Phe Gly
450 455 460

Tyr Leu Gln Leu Lys Thr Val Ile Ser Thr Phe Ile Arg Thr Phe Asp
465 470 475 480

Phe Asp Leu Asp Gly Lys Ser Val Pro Lys Ser Asp Tyr Thr Ser Met
485 490 495

Val Val Val Pro Glu His Thr Ala Lys Val Arg Tyr Thr Trp Arg Glu
500 505 510

<210> 10
<211> 451
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 10

Met Ser Ala Val Ala Leu Pro Arg Val Ser Gly Gly His Asp Glu His
1 5 10 15

Gly His Leu Glu Glu Phe Arg Thr Asp Pro Ile Gly Leu Met Gln Arg
20 25 30

Val Arg Asp Glu Cys Gly Asp Val Gly Thr Phe Gln Leu Ala Gly Lys
35 40 45

Gln Val Val Leu Leu Ser Gly Ser His Ala Asn Glu Phe Phe Arg
50 55 60

Ala Gly Asp Asp Asp Leu Asp Gln Ala Lys Ala Tyr Pro Phe Met Thr
65 70 75 80

Pro Ile Phe Gly Glu Gly Val Val Phe Asp Ala Ser Pro Glu Arg Arg
85 90 95

Lys Glu Met Leu His Asn Ala Ala Leu Arg Gly Glu Gln Met Lys Gly
100 105 110

His Ala Ala Thr Ile Glu Asp Gln Val Arg Arg Met Ile Ala Asp Trp
115 120 125

Gly Glu Ala Gly Glu Ile Asp Leu Leu Asp Phe Phe Ala Glu Leu Thr
130 135 140

Ile Tyr Thr Ser Ser Ala Cys Leu Ile Gly Lys Lys Phe Arg Asp Gln
145 150 155 160

Leu Asp Gly Arg Phe Ala Lys Leu Tyr His Glu Leu Glu Arg Gly Thr
165 170 175

Asp Pro Leu Ala Tyr Val Asp Pro Tyr Leu Pro Ile Glu Ser Phe Arg
180 185 190

Arg Arg Asp Glu Ala Arg Asn Gly Leu Val Ala Leu Val Ala Asp Ile
195 200 205

Met Asn Gly Arg Ile Ala Asn Pro Pro Thr Asp Lys Ser Asp Arg Asp
210 215 220

Met Leu Asp Val Leu Ile Ala Val Lys Ala Glu Thr Gly Thr Pro Arg
225 230 235 240

Phe Ser Ala Asp Glu Ile Thr Gly Met Phe Ile Ser Met Met Phe Ala
245 250 255

Gly His His Thr Ser Ser Gly Thr Ala Ser Trp Thr Leu Ile Glu Leu
260 265 270

Met Arg His Arg Asp Ala Tyr Ala Ala Val Ile Asp Glu Leu Asp Glu
275 280 285

Leu Tyr Gly Asp Gly Arg Ser Val Ser Phe His Ala Leu Arg Gln Ile
290 295 300

Pro Gln Leu Glu Asn Val Leu Lys Glu Thr Leu Arg Leu His Pro Pro
305 310 315 320

Leu Ile Ile Leu Met Arg Val Ala Lys Gly Glu Phe Glu Val Gln Gly
325 330 335

His Arg Ile His Glu Gly Asp Leu Val Ala Ala Ser Pro Ala Ile Ser
340 345 350

Asn Arg Ile Pro Glu Asp Phe Pro Asp Pro His Asp Phe Val Pro Ala
355 360 365

Arg Tyr Glu Gln Pro Arg Gln Glu Asp Leu Leu Asn Arg Trp Thr Trp
370 375 380

Ile Pro Phe Gly Ala Gly Arg His Arg Cys Val Gly Ala Ala Phe Ala
385 390 395 400

Ile Met Gln Ile Lys Ala Ile Phe Ser Val Leu Leu Arg Glu Tyr Glu
405 410 415

Phe Glu Met Ala Gln Pro Pro Glu Ser Tyr Arg Asn Asp His Ser Lys
420 425 430

Met Val Val Gln Leu Ala Gln Pro Ala Cys Val Arg Tyr Arg Arg Arg
435 440 445

Thr Gly Val
450

<210> 11
<211> 503
<212> PRT
<213> Homo sapiens

<400> 11

Met Leu Leu Leu Gly Leu Leu Gln Ala Gly Gly Ser Val Leu Gly Gln
1 5 10 15

Ala Met Glu Lys Val Thr Gly Gly Asn Leu Leu Ser Met Leu Leu Ile
20 25 30

Ala Cys Ala Phe Thr Leu Ser Leu Val Tyr Leu Ile Arg Leu Ala Ala
35 40 45

Gly His Leu Val Gln Leu Pro Ala Gly Val Lys Ser Pro Pro Tyr Ile

50

55

60

Phe Ser Pro Ile Pro Phe Leu Gly His Ala Ile Ala Phe Gly Lys Ser
65 70 75 80

Pro Ile Glu Phe Leu Glu Asn Ala Tyr Glu Lys Tyr Gly Pro Val Phe
85 90 95

Ser Phe Thr Met Val Gly Lys Thr Phe Thr Tyr Leu Leu Gly Ser Asp
100 105 110

Ala Ala Ala Leu Leu Phe Asn Ser Lys Asn Glu Asp Leu Asn Ala Glu
115 120 125

Asp Val Tyr Ser Arg Leu Thr Thr Pro Val Phe Gly Lys Gly Val Ala
130 135 140

Tyr Asp Val Pro Asn Pro Val Phe Leu Glu Gln Lys Lys Met Leu Lys
145 150 155 160

Ser Gly Leu Asn Ile Ala His Phe Lys Gln His Val Ser Ile Ile Glu
165 170 175

Lys Glu Thr Lys Glu Tyr Phe Glu Ser Trp Gly Glu Ser Gly Glu Lys
180 185 190

Asn Val Phe Glu Ala Leu Ser Glu Leu Ile Ile Leu Thr Ala Ser His
195 200 205

Cys Leu His Gly Lys Glu Ile Arg Ser Gln Leu Asn Glu Lys Val Ala
210 215 220

Gln Leu Tyr Ala Asp Leu Asp Gly Gly Phe Ser His Ala Ala Trp Leu
225 230 235 240

Leu Pro Gly Trp Leu Pro Leu Pro Ser Phe Arg Arg Arg Asp Arg Ala
245 250 255

His Arg Glu Ile Lys Asp Ile Phe Tyr Lys Ala Ile Gln Lys Arg Arg
260 265 270

Gln Ser Gln Glu Lys Ile Asp Asp Ile Leu Gln Thr Leu Leu Asp Ala
275 280 285

Thr Tyr Lys Asp Gly Arg Pro Leu Thr Asp Asp Glu Val Ala Gly Met
290 295 300

Leu Ile Gly Leu Leu Leu Ala Gly Gln His Thr Ser Ser Thr Thr Ser
305 310 315 320

Ala Trp Met Gly Phe Phe Leu Ala Arg Asp Lys Thr Leu Gln Lys Lys
325 330 335

Cys Tyr Leu Glu Gln Lys Thr Val Cys Gly Glu Asn Leu Pro Pro Leu
340 345 350

Thr Tyr Asp Gln Leu Lys Asp Leu Asn Leu Leu Asp Arg Cys Ile Lys
355 360 365

Glu Thr Leu Arg Leu Arg Pro Pro Ile Met Ile Met Met Arg Met Ala
370 375 380

Arg Thr Pro Gln Thr Val Ala Gly Tyr Thr Ile Pro Pro Gly His Gln
385 390 395 400

Val Cys Val Ser Pro Thr Val Asn Gln Arg Leu Lys Asp Ser Trp Val
405 410 415

Glu Arg Leu Asp Phe Asn Pro Asp Arg Tyr Leu Gln Asp Asn Pro Ala
420 425 430

Ser Gly Glu Lys Phe Ala Tyr Val Pro Phe Gly Ala Gly Arg His Arg
435 440 445

Cys Ile Gly Glu Asn Phe Ala Tyr Val Gln Ile Lys Thr Ile Trp Ser
450 455 460

Thr Met Leu Arg Leu Tyr Glu Phe Asp Leu Ile Asp Gly Tyr Phe Pro
465 470 475 480

Thr Val Asn Tyr Thr Thr Met Ile His Thr Pro Glu Asn Pro Val Ile
485 490 495

Arg Tyr Lys Arg Arg Ser Lys
500

<210> 12
<211> 504
<212> PRT
<213> Artificial

<220>
<223> Arabidopsis thaliana fusion protein

<400> 12

Met His His His His Ser Ser Gly Leu Val Pro Arg Gly Ser
1 5 10 15

Gly Met Lys Glu Thr Ala Ala Ala Lys Phe Glu Arg Gln His Met Asp
20 25 30

Ser Pro Asp Leu Gly Thr Asp Asp Asp Lys Ala Met Ala Asp Ile
35 40 45

Gly Ser Lys Lys Lys Arg Leu Pro Pro Thr Leu Lys Ala Trp Pro Pro
50 55 60

Leu Val Gly Ser Leu Ile Lys Phe Leu Lys Gly Pro Ile Ile Met Leu
65 70 75 80

Arg Glu Glu Tyr Pro Lys Leu Gly Ser Val Phe Thr Val Asn Leu Val
85 90 95

His Lys Lys Ile Thr Phe Leu Ile Gly Pro Glu Val Ser Ala His Phe
100 105 110

Phe Lys Ala Ser Glu Ser Asp Leu Ser Gln Gln Glu Val Tyr Gln Phe
115 120 125

Asn Val Pro Thr Phe Gly Pro Gly Val Val Phe Asp Val Asp Tyr Ser
130 135 140

Val Arg Gln Glu Gln Phe Arg Phe Phe Thr Glu Ala Leu Arg Val Asn
145 150 155 160

Lys Leu Lys Gly Tyr Val Asp Met Met Val Thr Glu Ala Glu Asp Tyr
165 170 175

Phe Ser Lys Trp Gly Glu Ser Gly Glu Val Asp Ile Lys Val Glu Leu
180 185 190

Glu Arg Leu Ile Ile Leu Thr Ala Ser Arg Cys Leu Leu Gly Arg Glu
195 200 205

Val Arg Asp Gln Leu Phe Asp Asp Val Ser Ala Leu Phe His Asp Leu
210 215 220

Asp Asn Gly Met Leu Pro Ile Ser Val Leu Phe Pro Tyr Leu Pro Ile
225 230 235 240

Pro Ala His Arg Arg Asp Arg Ala Arg Glu Lys Leu Ser Glu Ile
245 250 255

Phe Ala Lys Ile Ile Gly Ser Arg Lys Arg Ser Gly Lys Thr Glu Asn
260 265 270

Asp Met Leu Gln Cys Phe Ile Glu Ser Lys Tyr Lys Asp Gly Arg Gln
275 280 285

Thr Thr Glu Ser Glu Val Thr Gly Leu Leu Ile Ala Ala Leu Phe Ala
290 295 300

Gly Gln His Thr Ser Ser Ile Thr Ser Thr Trp Thr Gly Ala Tyr Leu
305 310 315 320

Met Arg Tyr Lys Glu Tyr Phe Ser Ala Ala Leu Asp Glu Gln Lys Asn
325 330 335

Leu Ile Ala Lys His Gly Asp Lys Ile Asp His Asp Ile Leu Ser Glu
340 345 350

Met Asp Val Leu Tyr Arg Cys Ile Lys Glu Ala Leu Arg Leu His Pro
355 360 365

Pro Leu Ile Met Leu Met Arg Ala Ser His Ser Asp Phe Ser Val Thr
370 375 380

Ala Arg Asp Gly Lys Thr Tyr Asp Ile Pro Lys Gly His Ile Val Ala
385 390 395 400

Thr Ser Pro Ala Phe Ala Asn Arg Leu Pro His Ile Phe Lys Asp Pro
405 410 415

Asp Thr Tyr Asp Pro Glu Arg Phe Ser Pro Gly Arg Glu Glu Asp Lys
420 425 430

Ala Ala Gly Ala Phe Ser Tyr Ile Ala Phe Gly Gly Gly Arg His Gly
435 440 445

Cys Leu Gly Glu Pro Phe Ala Tyr Leu Gln Ile Lys Ala Ile Trp Ser
450 455 460

His Leu Leu Arg Asn Phe Glu Leu Glu Leu Val Ser Pro Phe Pro Glu
465 470 475 480

Ile Asp Trp Asn Ala Met Val Val Gly Val Lys Gly Asn Val Met Val
485 490 495

Arg Tyr Lys Arg Arg Gln Leu Ser
500

<210> 13
<211> 21
<212> DNA
<213> artificial

<220>
<223> RT-PCR primer

<400> 13
ttaagaaaagc tggcgccctct t 21

<210> 14
<211> 30
<212> DNA
<213> Artificial

<220>
<223> PCR primer

<400> 14
ccgggatcca agaagaagcg tcttcctcct 30

<210> 15
<211> 30
<212> DNA
<213> Artificial

<220>
<223> PCR primer

<400> 15
ccgctcgagt taagaaagct ggccgcctctt

30